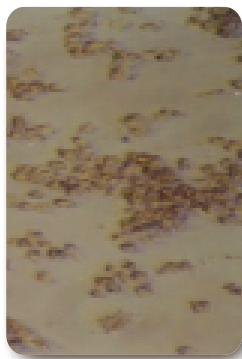




Animal Cell Culture & Virology

S. Nandi



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***Dedicated to the
Almighty
for everything***

Preface

Cell culture is an essential and indispensable tool in many branches of the life sciences and the applications of cell culture is getting increased exponentially in various fields of biological and medical research arena. It provides the basics for studying the regulation of cell proliferation, differentiation and product formation. Viruses replicate only within the living cells and with the advent of cell culture technique, it has become easier to grow viruses under *in vitro* condition. Besides due to agitation shown by the animal activist groups, religious people and animal ethics committee members, testing of different metals (arsenic, cadmium, mercury etc), toxic substances, toxins, drugs, medicines, viruses etc in animals have become a nightmare. The use of cell culture made it easier for testing of above mentioned substances. This book entitled “Animal Cell Culture and Virology” is intended to explain why and how the basic techniques are used and how to set up a cell culture laboratory and detailed procedures of different techniques of cell culture starting from media filtration, sterilization of glasswares, plasticwares etc, counting of cells, cryopreservation of cells and revival, primary cell culture, secondary cell culture, contamination and curing, applications, advantages and disadvantages of cell culture, isolation and identification of viruses in cell culture, SNT, titration of viruses, scaling up of cell culture, collection, preservation and dispatch of samples for diagnosis of viral diseases, cell line authentication and characterization etc have been described in a simple and easily understandable manner. Lastly it will be useful not only for undergraduates, graduates, technicians, researchers but also teachers and scientists directly and indirectly associated with cell culture in day to day experiments. In spite of my best efforts at perfection, element of human error is still likely to creep, the author will appreciate receiving any comments on the improvement of the book.

Author

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The book is written in a very simple and lucid manner so that everybody can read and understand it very easily. The book is useful for scientists, teachers, students, officers, diagnosticians and laboratory technicians as cell culture has become an essential and indispensable tool in many branches of life sciences and application of cell culture is getting increased exponentially day by day in various fields of biological and medical research arena. This book will provide detailed information on all aspects of the cell culture starting from establishment of a cell culture laboratory, primary culture, secondary culture, media filtration, collection, preservation and dispatch of samples for diagnosis of viral diseases, cell line authentication and characterization, contamination and curing, cryopreservation of cells and revival of cells besides description on ELISA, SNT, virus titration etc.



In my opinion, this book will be extremely useful to all persons who are

directly and indirectly involved in cell culture work for various biological experiments. Finally, students and examinees can enrich their knowledge on cell culture from the book and can face any challenge easily and confidently.

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